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ABSTRACT

Using a unique dataset we are able to examine the determinants of attitudes to the tribal leader in Sudan. We find almost half perceive their decisions to be unfair and a substantial proportion believe men to be favoured over women. Such perceptions are linked to education levels, both individual and locational. Trust in the tribal leaders is linked to perceptions of fairness, but is not a perfect match. There is evidence too such attitudes are linked to the local provision of services, although there is a different impact of services which merely benefit the individual and those which also potentially facilitate economic change.

Key words: fairness, Sudan, tribal leadership

JEL: O55, H79, D63

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1. Introduction

The concept of the tribe is still critical for many African countries. In many areas, particularly rural ones, an individual is a member first of all of a family, and then of a tribe. There is the potential for conflict, but to a large extent, family and tribal loyalties support each other harmoniously. This was the case 50 years ago (Wallerstein, 1960) and to a large extent it is the case today. However, it is still possible that tribal loyalties can compete with national loyalties to the detriment of the latter (Miguel, 2004). In Sudan, there are large differences between tribes in their lifestyles and also with respect to whether or not they have a chief, a hierarchy among chiefs, or something else. Substantial differences too exist in terms of the level of inequality among various groups within the tribe, and the relative power of the central authority. For example, the Zande and Shilluk are highly stratified, both with a king or noble chief who yields considerable independent power. On the other hand the Amarar, Toposa, Turkana and Nuer are less hierarchical and 'chiefless' (Nugent and Sanchez, 1999).

In Sudan, the tribe remains at the heart of the governance structure. There are over 400 separate ethnic and cultural communities which may be called tribes. It is predominantly an agricultural country and most of the land is divided into a number of exclusive tribal areas (dars). Each of these retain their own, and somewhat differing, property rights. For example, they may be limited to just land use or include the right to sell and to rent as with the Fur, Nuba, Shilluk and Zande tribes. The differences often relate to whether the society is predominantly an agricultural society or a herding one. In nomadic tribes, e.g. the Bisharin, Hadendowa, Kababish and Turkana, most people have the right to take their animals almost anywhere within the tribal dar, although exceptions exist to protect crops which have been planted but not harvested. Property rights may also effectively differ between men and women. The various tribes also have their own institutions, and their economies, although for most areas predominantly agricultural, differ substantially in part because of substantial climatic differences (Nugent and Sanchez, 1999). In addition, until recently there has been a relative stability of these tribal land areas and institutions over time, although that has

changed somewhat due to the large flows of people following conflict both with the South, but also other areas such as Darfur[1].

This stability is due to a number of factors, some historical relating to colonial times, but in addition, to a large extent Sudan has experienced only very slow economic growth and social change and this tends to lend itself to institutional stability. However we live in a world of change often linked to technological developments, but sometimes too to climate and political developments, and this may be impacting adversely on this stability. In this paper we will be analysing individual attitudes to tribes and tribal leaders, with a particular focus on the perceived fairness of their decisions, both overall and between men and women. We will also be analysing the trust people have in tribes and the impact of perceived fairness on that trust. There is a literature on leadership, mainly in developing countries, which argues that perceived fairness is an important, possibly the most important, factor determining people's overall leadership evaluations (Tyler, 1986). Is this also the case in a totally different society and context? The basis for the analysis will be two sample surveys carried out in 2013 and 2014, of over 4700 people across the whole of Sudan, i.e. it excludes South Sudan which of course is now a separate country.

The background to our analysis are the several conflicts which have beset the country in recent decades, indeed almost since independence from the UK in 1956. Since then military regimes have tended to favour the centre and the north of the country, and since 1984 have also been Islamic-oriented. The dominant religion in Sudan, as opposed to Sudan together with South Sudan, is Sunni Islam, with a small Christian minority. The conflicts resulted in the establishment of the Sudan People's Liberation Movement (SPLM), whose goal was to fight Islamist imposition (Johnson, 2003). The Comprehensive Peace Agreement of 2005 eventually led to the creation of an independent state, South Sudan in 2011, ending a civil war in which more than two million people had died since 1989 alone. But this has not ended all conflict within Sudan, and since then Sudan has been fighting rebels in the East (until 2006), as well as the Sudan People's Liberation Movement-North (SPLM-N) in Southern Kordofan and the Blue Nile states. This is in addition to a separate conflict in the western region of Darfur beginning in 2003, which has displaced nearly two million people and caused an estimated 200,000 to 400,000 deaths and the ongoing humanitarian crisis caused by the civil war in South Sudan. Much of this conflict stems from the desire of the centre to promote a brand of Islamic culture and religion throughout the entirety of the country. There is also

[1] Although to an extent the current tribal structure is an artificial construction, built by the British, for reasons of effective control over the country. This is certainly the case in Darfur, even down to the construction of the tribal dars (Bassil, 2014).

substantial hostility between the different tribes. The army has struggled to deal with this and has taken to arming tribal militias, which has on occasion exacerbated inter-tribal conflict (Bassil, 2014). More generally, Zain (1996) has argued that the state has played little direct role at the local level, other than administration, giving a greater role to the tribal elites, with the expectation that they will promote the states interest.

Several researchers have alluded to the role of tribal identity in the escalation of the violence (see Assal, 2009). De Waal (2005) also refers to 'a recent polarization of "Arab" and "African" identities' that also has influenced the conflict. Madibbo (2012) argues that the Northern ruling elites are seeking to impose an Arab identity as the basis of the definition of the national identity framework. This is reflected in the use of Arabic as a medium of education and public communication, and the adoption of Islam as a state religion. With the split of South Sudan from the rest of the country, this may be less problematic, but there is still a Christian minority in Sudan, and Sudanese Arabs comprise about 70% of the population[2]. But it still may have led to increased friction between some tribes and the central authorities and may in some circumstances have led to a reduction in an individual's attachment to the tribe and tribal leader[3].

The paper will proceed as follows. In the next section we will review various streams of the literature relating to the tribe, and concepts of fairness and trust. We then turn to a discussion of the socio-economic and spatial determinants of fairness and trust. In section 4, we present and discuss the data, which we analyse in section 5. Finally we conclude the paper. Much of the work that has been done on trust is inter-personal trust. Trust between members of a social group and their governing authorities is sometimes known as 'linking' or 'vertical' social capital. The measurement of this vertical social capital, and our attempt to explain its determinants, is one of the main innovations of the paper. One of the main conclusions to emerge is the importance of both individual characteristics and the characteristics of the locality in which the person lives. A particularly important factor, along both dimensions, is the level of education. There is little to compare our results with in either an African or a tribal leader context. But they are remarkably similar to some studies carried out in high income countries (Hudson, 2006).

2. Literature

[2] See the CIA's World Factbook.

[3] These conflicts are an important part of the background to our analysis, although they are not our prime concern as such. Nonetheless, the considerable work on the relationship between ethno-linguistic fractionalization and conflict (Collier and Hoeffler, 2004) helps us understand both the nature of these conflicts and inter-tribal relationships.

2.1 The Tribe

The concept of the tribe itself is somewhat contentious and there are disagreements as to whether the tribe is the more relevant unit, or alternatives, such as the community, the cultural unit or speakers of the same language. There is even controversy over the very definition of a tribe (Fried, 1975). These considerations are as likely to be relevant within countries as between them, and certainly within Sudan, as we have already suggested, there are substantial differences between tribes, and hence what tribes and tribal leaders mean to members of the tribe. One particularly important distinction is where tribe members reside In urban areas there are new sources of power and prestige which, for many people, offer more rewards than the tribal government[4] (Wallerstein, 1960). Wallerstein further argues that methods of government are different and their role in the national social structure is different, however they bear sufficient resemblance to the rural, traditional tribe that often the same term is used. Thus the tribe, may still be important in urban areas, but may also be a slightly different concept to that in rural areas, and linked more to ethnic groupings. Given this, the role of, and respect for, the authority of the chief may also be different in the two areas.

Much of the tribal leader's power comes from the tribal courts. The court system is complex in Sudan, slightly vague and also in a state of some flux. The people's local courts consist of a president, vice president and sufficient members to be selected by the chief justice. Most of the judges at higher levels, e.g. president and vice-president, are hereditary leaders whose legitimacy stems from this, more than being government appointed. In the north, appeals can be made to higher courts and lower courts are supervised by the Chief Justice. The People's Court administers 'the custom' within its jurisdiction, provided that it is not contrary to justice, morals or public order. It may also administer any other law that it is given the authority to do so by the Chief Justice. Hence custom is an important basis for the law and its administration, but the qualification suggests that it is secondary to statutory law or Islamic law. Being as the judges with the ultimate control over the peoples' courts reside in the north, there is the potential for conflict. There is however evidence that because the controlling authorities do not want to embarrass or undermine the chiefs, they will usually allow their judgements to pass (Deng, 2009). But this is not the only factor affecting the peoples' courts. Muslim judges have tended to argue that custom law cannot be applied to Islamic law as it is above this, and the attempts to extend Sharia law across the country have

[4] Of course, there can be more complex splits than simply urban and rural. Some rural areas may be adjacent to large cities and hence the inhabitants may be closer to city people than even people in small, and remote towns in their attitudes. There may also be differences between cities. Despite this, a single urban-rural dummy variable might still be expected to capture any general differences. However, to anticipate the results, this variable is not significant. There are, however, very substantial differences between states.

caused problems. Political instability too has had an impact and one of the consequences of the Darfur crisis is that settlement of disputes at the local level has substantially diminished (Deng, 2009)

2.2 Fairness

In a general context, much of the work that has been done focuses on the fairness of outcomes, e.g. in the context of judicial decisions the fairness of those decisions. There has been a lot of work done on evaluating leaders, including with respect to their perceived fairness, although mainly within the context of developed countries. Leventhal, Karuza, and Fry (1980) suggest that in interactions between citizens and the social system the major determinant of satisfaction with the social system and its leaders should be the outcome of the process as it affects the individual. Tyler and Caine (1981) find both outcomes and procedures to be important, although predominantly the latter. Their study was in the context of teachers and citizen's evaluation of political leaders, and the latter at least moves closer to the issues we are analysing, although still within the context of a developed country far removed from the realities in Sudan.

Perhaps surprisingly, there is little empirical work on decisions of leaders and concepts of fairness. Much of the literature pertains to fairness of, e.g., employment tribunals or working conditions, i.e. it relates to fairness in business, and generally in developed countries. For example, Korsgaard et al. (1995) found that member input and members' influence on a decision affect perceptions of procedural fairness and consequently, commitment to the decision, attachment to the group, *and trust in its leader*. This was in the context of management teams in a Fortune 500 company. In emphasising individual involvement, it does reflect much of the literature in this area which further emphasises the importance of individuals having a voice in the process (Lind, Kanfer and Earley, 1990) and being made to feel valuable members of the group (Lind and Tyler, 1988). These insights may also have some relevance for the concepts of fairness we are analysing.

There has also been work done on the potential impact of perceived leadership fairness. Traditional psychological evaluation of overall leadership evaluations have viewed them as being based on the leader's performance, i.e. their skill in providing group benefits or in solving group problems (Hollander and Julian, 1970). Variations of this have modified it so that it depends upon outcomes relative to expectations. But Tyler (1986) also argues that

concerns over fairness are an important factor in leadership evaluation.[5] In Sudan, leaders may be evaluated not only on the things they have control of, but the things they cannot control such as the weather.

2.3 Concepts of Trust

Hardin (1993) has argued that trust is fully explicable as a product of rational behavior. There is also a game theoretical aspect to it whereby Hardin argues that "I trust you because it is in your interest to do what I trust you to do". This, as does much of the literature, tends to focus on interpersonal trust, whereas our focus is more related to institutional trust, where the institution in this case is the tribal leader. Because the leader is a specific individual, there is a an element of relating to a known individual. But this is the same, e.g., for trust in political leaders, which is clearly very different to interpersonal trust. There are two alternative, although probably complementary, explanations for the determination of institutional trust. Cultural theories argue that it is exogenous (Inglehart, 1997) and as such it is frequently viewed as being learnt early in life. Institutional theories on the other hand argue that it is endogenous (Hetherington, 1998, North, 1990) and influenced by institutional performance, i.e., in our case, the performance of the tribal chief. In the context of our study, both may have elements of truth with the former becoming more relevant when people are young, and the latter as they age. That is trust starts out as being mainly determined by an individual's background, but as the individual ages, so their views are more determined by their own experiences. This links to an important part of the literature which deals with experienced trust, i.e. trust based on people's experiences (Glaeser et *al*., 2000; Hardin, 2002).

Direct experience of the tribal leadership is likely to vary between people in a systematic manner because people of different backgrounds may have different experiences, with the leadership possibly giving more respect to rich, successful and educated citizens. This has similarities with Putnam's (2000) observation that in all societies the "have-nots" are less trusting than the "haves" probably because they are treated with less respect. In part too, some people may come into contact with tribal leadership decisions more than others, e.g. in connection with property rights. This reflects the hypothesis that attitudes to institutions depend upon knowledge, or experience, of that institution. More knowledgeable people are more likely both to have an opinion and have an opinion which is closer to reality, or at least reality as they experience it. Hence we would expect their perceptions of institutions to differ

[5] As far back as several millennium BC in Ancient Egypt Ptahhotep emphasised the importance of leaders to be both (i) generous and (ii) listen to someone's plea in full as the very act of making that plea can bring comfort. That is he stressed both outcome and procedure.

from others, but the exact nature of the impact may vary from society to society. However, knowledge can be gained in ways other than through direct experience. The most obvious variable to reflect knowledge is education. Age may also be relevant if people learn from experience. However, age may also reflect other lifestyle differences.

There is a literature which looks at trust in Africa, although relatively little which is directly relevant for our study. Thus Barr (2003) looks at trust in Zimbabwean villages, but this focuses more on interpersonal trust rather than institutional trust. The paper by Fjeldstad (2004) is more related to institutional trust, in South Africa, but is more focused on the impact of such trust on people's behaviour, in the case of this paper on the payments of local authority service charges, rather than the determinants of such trust. There is some empirical work to draw upon from developed or transition countries. Mishler and Rose (2001) analyze institutional trust in Central and Eastern Europe along several dimensions including parliament, trade unions, the police, the courts and the media. Their results show only a weak significance for socio-economic variables, with trust increasing with age and greater for smaller towns and villages. Perceptions of factors such as corruption and economic performance are in contrast much more significant. Schweer (1997) focuses on the determinants of young adults' trust towards institutions and concludes that the perceived attributes of an institution are relevant for the degree of trust. Hudson (2006) analysed institutional trust in EU countries, finding it to be lower for the unemployed and to increase with income and education. There was a nonlinear impact of age. In general it declined with age, but for several institutions trust first declined with age and then increased, with the turning point being between 44 and 56. He also found trust to be lower for divorcee's in institutions which may impact upon the divorce process, e.g. the law and the national government.

There is a specific part of the literature which has looked at the impact of corruption on attitudes to a country's institutions. This is of relevance to our study, as a key variable in the regressions will be requests made of individual's to pay bribes. Using national sample survey data, from four Latin American countries, Seligson (2002) finds that independent of socioeconomic and demographic variables, exposure to corruption erodes belief in the political system. This finding is supported by other research, for example Sun and Wang (2012) find that negative actions by the government, including corruption and the abuse of privilege, significantly reduces trust in government. Seligson (2006) found that those who experience corruption, of which being asked for a bribe is a component part, are less likely to believe in the legitimacy of their political system. Even in high income democracies, bribery and corruption have been found to be associated with large and more complex public sectors that are less susceptible to political and hence electoral oversight (Hamilton, 2013).

3. Theory: Perceived Fairness and Trust

We assume perceived fairness (F_i) is linked to the distance between the individual's perception of what is right (Ω_i) and the decision laid down by the tribal leader (Ω^L):

$$F_i = f(\Omega_i - \Omega^L) \quad (1)$$

Ω^L will depend upon tribal custom (Ω^*). However, Ω_i will also be determined by tribal custom, which may differ between tribes. Because both Ω^L and Ω_i are functions of Ω^*, there is likely to be an alignment between Ω_i and Ω^L, provided Ω^L does not deviate too far from Ω^*. Nonetheless, as indicated in the literature, Ω_i can move away from Ω^* for a number of reasons. Firstly education may open the individual to new ideas, which suggest a norm of behaviour differing from tribal custom (Deng, 2009). Apart from this, the individual will also be influenced by the opinions of others in their locality. Thus the characteristics of those in the neighbourhood, including their average level of education, may also impact on Ω_i. Thirdly people may respond more quickly to a changed socio-economic environment[6] than do tribal norms or customs, with change thus driving a wedge between Ω_i and Ω^*, and thus Ω_i and Ω^L.

However, individuals are likely to be influenced in their perceptions of fairness by their own self-interest, and the extent to which they are rewarded by the tribal leader. For many, the dependence on the tribe stems from limited opportunities, and what opportunities there are, are largely under the control of the tribal leadership. Once those opportunities expand, we would expect dependence upon the tribal leadership to diminish and people to become more ready to take a critical stance. Hence being in paid employment, particularly for the private sector, may well result in a growing gap between Ω_i and Ω^L. This is consistent with Deng's (2009) observation that opportunities for employment open the way for new sources of income which inevitably has an impact on traditional obligations and dependencies. Finally the individual will tend to question leadership decisions, the greater is the gap between Ω^L and Ω^*, the tribal norm. We will include two variables to proxy this. Firstly, the extent to which people have access to the courts, as delivering justice through the courts is, as we have seen, a

[6] Bassil (2014) notes that in parts of Darfur there are clear signs that urbanization, education, nationalism and economic development are together undermining the solidarity of the tribal unit.

key function of the tribal leaders at the local level[7]. Secondly the extent to which bribery is in evidence in the individual's location. In many places bribery is an implicit part of the social norms, i.e. it is part of everyday life. But in Sudan it is less likely to be part of the tribal norms, which dictate how decisions *should be arrived at*. Indeed bribery may be an attempt to circumvent these tribal norms. In many locations, given the powers of the tribal leadership the ability to ask for bribes will ultimately stem from them. Hence we include a variable reflecting the average level of bribes requested from people in the individual's location, with the expectation that higher levels of requested bribes will reduce support for the tribal leader and their decisions.

The literature suggests that overall evaluations of a leader will in part depend upon the perceived fairness of their decisions (Tyler, 1986). If we link such overall evaluations with trust, then perceptions of fairness will also impact upon trust. But as Tyler also suggests, trust and perceived fairness may differ as the literature also suggests. For example, if the tribal leadership is perceived as being unfair, but in a way which benefits the individual, trust may not be eroded, even enhanced. Secondly, the literature suggests leaders are evaluated on outcomes, as well as procedures. Hence we would expect those who prosper under the tribal leadership to be more trusting. If the tribal leadership, despite being unfair, protects the tribe from outside influences and delivers other benefits, they may still be trusted.

Thus based both on this analysis and the literature review we formulate the following hypotheses. Firstly perceptions of fairness reflect the individual's position. Those who are doing well will tend to perceive the tribal leaders' decisions more favourably than those who are not doing well. Secondly increased education, both the individual's, and in the location in which they live, will tend to open the individual to non-tribal norms and lead them to be more critical of the tribal leader's decisions. Thirdly, a changing environment is likely to reduce the perceived fairness of decisions, if tribal norms are slow in responding to changing circumstances. Finally, we anticipate that the larger the family unit, the more perceptions of fairness will decline as the family unit presents an alternative to the tribe. This was discussed earlier in the paper, where it was suggested that the two harmoniously coexist. Nonetheless, the family presents an alternative framework of support for the individual, to that provided by the tribe, and the larger the family, the greater is its potential importance. In terms of the impact of perceived fairness on trust for the tribal leader we anticipate, along with the

[7] Of course access to the courts does not guarantee an outcome the individual perceives as fair. But the literature suggests that such perceptions are linked with judicial procedures and the possibility of attending a court for a decision may in itself promote perceptions of fairness (Tyler, 1986)

literature, that this will be a significant factor, but not the only one. Also relevant will be the benefits, individual and collective the leadership brings to the individual.

4. Methodology and Data

Insert Table 1

The dataset was collected by Sudan Polling and Statistics Center (SPSC) in collaboration with the UK's Department for International Development on 11-21 July 2013 and 3-5 June 2014 (see Hamilton and Hudson 2014 for details). The survey covered all 15 states which now constitute Sudan. The sampling proceeded as follows: (i) the probability that any given locality was selected was proportional to size. Four localities were chosen from each state and a cluster was randomly selected from each of these; (ii) households in the locality were randomly selected with a replacement sampling strategy; (iii) finally an individual who was 18 years or older, was selected from each household, using the Kish Table method for selection, to respond to the survey. Field interviewers were allocated to their own hometown or countryside. It was felt that this would encourage a capacity to understand cultural, social and political conditions. This process resulted in 229 localities being surveyed in both years[8] – both rural and urban. The survey is done in less than ideal conditions, with considerations of security often being a concern. But these concerns did not stop the survey and these problems add to the value of the survey data collected.

The dependent variables relate to the linkages with the tribal leader[9]. The first focuses on the extent to which the tribal leader's decisions are perceived to be fair. This is coded 1 if people feel such decisions to be unfair and otherwise zero. We chose this specification as it then links in with the other variables, where an increase defines less fairness or trust. The second relates to whether men are treated more fairly than women in these decisions by the tribal leader. This is coded 1 if the respondent feels men are treated better and zero otherwise. The alternative includes both those who thought everyone was treated fairly, or tribal decisions were not fair but did not discriminate positively in favour of men. Both these variables are binomial and we shall be estimating the equations using binomial probit. This will not be the case for the third equation where we shall be using ordered probit. The dependent variable relates to trust, or rather mistrust, in the tribal leader. It is coded 1 for a lot

[8] The localities differed in the two years.

[9] As noted before the concept of the tribe and hence the tribal leader from place to place. Our question allows the individual to interpret it in their own way. Any differences, may then be reflected in the various locally defined variables and the state dummy variables.

of trust to 4 for none at all. The independent variables include marital status, age, gender, family size and information on socio-economic position, including employment status and education. In addition to these variables which are defined on the individual, we also included the averages of individuals surveyed in the respondent's location. This will include education, income and bribery and also perceptions on the overall level of the services they received[10]. The services we looked at include electricity, hospitals, schools, water, sanitation, the police and the courts. The individual responses ranged from at a very low level (coded 1) to excellent (coded 5). All variables are defined in Table 1.

Insert Table 2

Table 2 presents summary data relating to the three tribal leader variables and how this varies across individual characteristics and between states. The first column relates to those who believed the tribal leader's decisions to be fair. Of those who responded, less than half thought they were fair in 2013 and slightly more than half did so in 2014. There appear to be relatively few differences on the basis of age, income, gender, urban or rural location and whether the individual works for the government. However, perceptions of fairness were greater for less well educated people and for those who worked for the government. Whilst they were less for those who had been asked for a bribe, those who work for a private company and widowed or divorced women[11]. Many of the differences are in line with a priori expectations. The second column relates to the proportion who feel that tribal decisions tend to favour men more than women. In 2013 slightly more than 20% of those who responded thought this to be the case. This proportion was greater amongst those who had been asked for a bribe, who work for a private company and divorced or widowed women. It was less for relatively lowly educated people and men. The final column relates to trust in the tribal leader. *This variable is defined to increase with levels of mistrust.* The average response for the full sample was 2.181. This lies between 'some trust' (coded 2) and 'little trust' (coded 3), being closer to the first. Such trust is less, i.e. the average is higher, for those who have been asked for a bribe and also those who work for a private company. It is greater for those with relatively low levels of education. There are substantial differences between the different states. For example, North State has particularly high levels of perceived fairness of the tribal

[10] We do not include locational trust and fairness, as we are seeking to understand the determinants of individual perceived trust and fairness, and to say they depend upon locational trust and fairness is not very informative.

[11] We also had data on those who received remittances from abroad, but in the regression analysis this was not significant and has been omitted from the variables included in the analysis.

leader's decisions, do not tend to think men are treated more favourably than women, and have a particularly high level of trust in the tribal leader. North Darfur, on the other hand has lower levels of perceived trust, higher perceived favouritism of men in tribal decisions and lower levels of tribal trust.

The next three columns relate to 2014. They tend to show higher levels of perceived fairness, lower levels of discrimination in favour of men and slightly higher trust. This change since 2013 could reflect (i) genuine shifts in perceptions which are not linked to changing socio-economic conditions, which may not be impossible given the large changes which continue to take place in the country, (ii) normal sampling variations or (iii) a change in the characteristics of the people being interviewed, possibly linked to socio-economic changes in the country. We return to this later after having done the regression analysis, but for now note that the relative ordering between different groups of people is relatively stable. Thus in 2014 the higher educated, those who have been asked for a bribe and those who work for a private company tend to perceive tribal decisions as being unfair more than do others. But in addition, so do young people and anybody who works. There have also been some substantial changes. Hence, previously men were less likely to perceive a bias in tribal decisions towards men, but in 2014 they are more likely to do so. Again, this may simply reflect normal sampling variation, but may also be a reflection of events in Sudan.

Insert Table 3

5. Regression Results

Table 3 presents the regression results. They are the pooled results from both years. The first column includes only individual based variables and relates to whether tribal decisions are perceived as fair. *The dependent variable is coded 1 if perceived as unfair and 0 if fair, hence a significantly positive coefficient indicates that as that variable increases, perceived fairness declines.* We can see that perceived fairness is higher for married people, divorced and widowed men, and increases with the extent to which income satisfies an individual's needs[12]. But it declines with the level of education and also family size. There is also a significant nonlinear impact of age on perceived unfairness. This first increases with age and then declines. The turning point is at 86.0 years, thus in effect it increases with age, flattening out for very old people, i.e. there is no effective turning point. In the next column, where we only

[12] This relates to the ability to cover household bills. Those who have the ability to meet their bills, perceive decisions to be fairer than those who cannot meet their household bills.

include variables which are significant, we add to these variables, further ones defined at the level of the respondent's location. These are very significant. In particular, tribal leader's decisions are more likely to be perceived unfair the higher the average level of education and income in the location, with the former being particularly significant[13]. It also declines the more common attempts at bribery are, and the less access people have to the courts. Poor access to sanitation also decreased perceived fairness, whilst better electricity services had the opposite effect. We will delay discussion of these effects until we have done further regressions. The inclusion of these additional variables has changed the significance of some of the individual based variables, increasing it for some, decreasing it for others. In addition the two age variables, which are jointly significant at the 5% level, now indicate a turning point at 33.6 years.

The next two columns relate to perceptions of whether men are treated more fairly than women. The first of the two regressions is again limited to individual centred variables, with very few being significant. Such perceptions increase with family size and are significantly less for men than women, both being significant at the 10% level. However, both increase in significance when we add the location based variables in column 4. In addition, divorced or widowed women are more likely to perceive the decisions as being biased to men. With respect to the location based variables, perceptions that men are treated more fairly than women increase with the average level of village income, education, and requests for a bribe. However, they decline with better access to sanitation and the courts, but increase with better access to hospitals and water.

The final set of regressions relate to tribal trust, with the first once more excluding location centred variables. *We again emphasise that higher values of the dependent variable reflect less trust.* The two age variables are again significant and suggest that trust first decreases and then increases with a turning point at 41.6 years. Trust also declines with education and increases with relative income and is lower for those who work for a private firm. It is also higher for divorced or widowed people, both men and women. In the next column we once more add the location centred variables. Trust declines with the average level of village education and relative income. It is however greater the higher is local absolute income, access to the courts and sanitation. But it declines with access to water, electricity and schools, and requests for bribes. This differential impact of better services, sometimes increasing trust and sometimes decreasing it, which was in evidence in previous regressions, is something we discuss further in the conclusion.

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[13] This links in with the wealth of the area, a wealthy area is possibly characterized by more opportunities than poorer areas. That is the socio-economic distance is large between wealthy areas and the average tribal areas.

In the next regression we add perceptions of tribal leader's fairness as an explanatory variable. This is very significant, but individual based variables remain significant as do location based ones. This would suggest that such perceptions of fairness are an important factor in determining overall trust for the tribe, but it is far from being the only factor. One possible problem here is endogeneity, that the causality may go from trust to perceived fairness, as well as in the reverse direction. The Hausman test suggests that this is indeed likely[14]. It tests for whether tribal trust might impact upon perceptions of fairness in a simultaneous linkage. Hence we calculate the predicted probability from a regression based on regression 3.2, with additional explanatory variables which are ultimately significant in the trust equation. The results are reported in the final regression. Predicted trust is significant, but with a nonlinear impact and a suggested turning point which indicates a flattening out at higher probability levels rather than an actual turning down, which would be implausible. Inevitably, as the predicted values are based on many of the other explanatory variables in 3.8, the significance of the latter has tended to decline. But they are still significant, once more indicating that perceived fairness is an important determinant of overall trust, but it is not the only one.

In all of these regressions dummy variables relating to the different states were included and it is to these that we now turn. They were in general very significant and signify substantial differences in attitudes across states which do not disappear, nor even decline substantially, once we include the village based variables indicating that the differences do not simply relate to different stages of development, but reflect something more fundamental. They are shown in Figure 1. They are based on the second, fourth and sixth regressions in Table 3. They tend to move together, South Darfur e.g. perceive most fairness overall and with respect to women, and they also have a low level of mistrust. Red Sea, on the other hand tends to be the opposite on all three dimensions. However, Algadareaf is more heterogeneous with very low levels of mistrust, slightly higher, relative to other states, perceptions of unfairness to women, and substantial higher perceptions of unfairness per se.

Finally in most cases the dummy variable which distinguishes between the two samples was significant, although less so in most of the trust equations. We cannot say whether this reflects genuine changes due to an overall change in culture or whether they reflect sampling variations. A decision on this will need to wait until more surveys are available. However, it cannot reflect changing individual characteristics as these were included in the regressions.

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[14] The test statistic was 65.1. It is distributed as X^2 with 23 degrees of freedom and is significant at the 1% level of significance.

Insert Figure 1 about here.

6. Conclusions and Implications

The influences on people's attitudes to tribal leaders and leadership in Sudan are linked to both individual characteristics, the characteristics of others in the same locality and the characteristics of that locality itself, perhaps reflecting the behaviour of tribal leaders themselves. In terms of individual characteristics, education is critical. The more educated the person, the more they tend to view decisions as being unfair, tribal leaders untrustworthy and, to an extent, biased towards men in their decisions. This was compensated for by those who worked tending to have a more favourable view of tribal leaders and their decisions. The impact of individual education was reinforced by the level of education of those in the same location. In this way we have a multiplier effect, one person's education has an impact beyond themselves. The coefficients on age suggests that as people age they first become less favourable and then more favourable to the leadership. This may reflect genuine life cycle effects. But there is also the possibility that it combines together life-cycle and generational effects. For the former, as people age they gain more knowledge and experience about the leadership and also more information on non-tribal norms. On this basis, older people should be more sceptical than younger ones. But this might be countered if there is a generational gap with older generations being more respectful than younger ones, or if older people become more dependent on the tribe.

It is noticeable how similar these results are to Hudson's (2006) when analysing trust in the EU, particular with respect to income, divorce, work status and age. Given the differences in the societies this is remarkable, and suggests similar dynamics are driving perceptions of fairness and leadership trust in vastly different contexts. However one substantial difference relates to the differing impact of education, which given the different backgrounds of people in the EU and Sudan is not surprising. People in the EU often have little knowledge about institutions of governance, with ignorance breeding scepticsm which education reduces. Many people in the Sudan, however know the tribal norms very well, but not other viewpoints and education may then drive a wedge between the individual and the tribal norm.

The results with respect to whether decisions favoured men, were of particular interest. Firstly we notice that the impact of individual characteristics were relatively weak, although for example there was strong evidence that men perceived this less than women and also some evidence that divorced or widowed women tended to perceive this even more than other women. Divorce and widowhood are often linked with the transfer of property and this often brings the individual into direct contact with the tribal leadership. With respect to the locality

based variables, bribery was particularly important, suggesting that attempts to extract bribes may often target women, or that women find this less acceptable than men. But it was the impact of the service variables which were most interesting. Good local access to sanitation and hospitals increased perceptions of equal treatment to men and women. Women have specific sanitation needs, yet in many areas there are no adequate toilet facilities. Meeting these in public is humiliating and can also be dangerous, especially at night where assault is a genuine risk (Fisher, 2008). Access to modern health care is particularly important in pregnancy and childbirth and also for issues of family planning (Puentes-Markides, 1992). Without access to hospitals people resort to traditional medicine, but in many societies traditional medical practices see illness of women as attributable to a women's inappropriate behaviour (Okojie, 1994). More surprising perhaps, is that better provision of schools increases perceptions of unequal treatment. The bringing up of children is the traditional and most important role of women in many societies. Schools take some of the responsibility for this away from the mother and in doing so may reduce their importance within society and open them up to greater unfair treatment. If this is the case, then it is an example of how policy can have unintended consequences.[15]

More generally better access to sanitation tends to see the individual with a more favourable view of the tribal leader and the tribe on all dimensions. This is also true for access to the courts. But better access to other services tends to worsen people perceptions of fairness and trust in the tribe. Better access to water and electricity have indirect effects, e.g., opening up new opportunities to individuals[16] in agriculture, over and above the direct effects of simply better access to the service itself for individuals' personal benefit. Whereas better access to sanitation and health care simply improve people's lives without opening up new opportunities, e.g. economic opportunities, which may change society.

At best we can say that support for the tribal leader, in terms of trust in them and perceptions of their fairness is lukewarm and in some states and amongst some villages and people of certain characteristics positively hostile. Given the volatile nature of Sudan, and the way the tribal system has been used and misused over the decades by central governments, this may not be too surprising. But this matters in the sense that tribal leaders exercise authority and that authority is linked to that of the state itself. If support declines still further

[15] Schools provide knowledge and it is possible that this filters through to the mother and thus changes perceptions. But the insignificance of either individual or locational levels of education in the regression suggests that this is not an important factor.

[16] These cannot however include greater access to television or the Internet, providing people with information. We have data on individual access to these media and there was no evidence that such access tended to reduce tribal links.

their ability to exercise this authority will become compromised. What too if individuals themselves are moving more and more away from the group norm and, or, becoming more heterogeneous in their attitudes. That would suggest society is becoming more difficult to govern and perhaps the state will need to respond by becoming more flexible and less dogmatic.

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Table 1: Data definitions

Tribal trust	Trust local tribal leader coded 1 (a lot) to 4 (not at all).
Fair	Binary variable, coded 1 if decisions handed down by local tribal leader are not fair to everyone.
Fairer to men	Binary variable, coded 1 if decisions handed down by local tribal leader are fairer to men than women.
Bribe	Whether have been asked for a bribe, responses coded 1 to 4, i.e. from in the last month, six months, year, and never.
Age	Age in years
Education	Coded from 1 (illiterate) to 9 (PhD) as an increasing measure of education.
Income	Household income: Coded 1 (100-500 STG), 2 (500-1000 STG), 3 (more than 1000 STG), monthly income
Relative (to needs) income	Coded 1 if the household income is not enough to cover the household bills, 2 if it enough to cover the household bills, 3 if it is enough to cover necessary expenses with nothing left over and 4 if it is sufficient to allow saving.
Marital variables	Binary variables taking a value of one if the person was single/married/ divorced or widowed.
Male	Coded 1 if the individual was a male
Urban	Coded 1 if lives in an urban area.
Works	Coded 1 if in employment.
Works for Government/Private firm	Coded 1 if works for the Government/Private company.
Locality variables	(*average of responses in individual's locality)*
Service	individual response coded 1 if the services they received was at a very low level to 5 if it was excellent. Services include electricity, water, sanitation, school, hospital, police, the courts and water.

Table 2: Summary Data on Identification in 2013

	2013 Decisions Fair	Fairer to Men	Trust	2014 Decisions Fair	Fairer to Men	Trust
All	0.43	0.208	2.181	0.545*	0.159*	2.24
Individual Characteristics						
Age<34	0.428	0.215	2.193	0.526*	0.163*	2.265
'Low Education'(<5)	0.498	0.191	2.034	0.623*	0.144	1.98
Low Income (=1)	0.432	0.194	2.162	0.542*	0.165	2.18
Insufficient relative income (=1)	0.360	0.230	2.204	0.538*	0.149*	2.248
Bribe<4	0.274	0.277	2.387	0.450*	0.117*	2.382
Married	0.443	0.210	2.124	0.570*	0.152*	2.215
Single	0.405	0.210	2.283	0.506*	0.154*	2.294*
Male	0.435	0.186	2.195	0.539*	0.134*	2.238
Urban	0.426	0.209	2.141	0.564*	0.153*	2.187
Work	0.427	0.203	2.154	0.515*	0.166	2.264
Works for government	0.460	0.211	2.157	0.514	0.156	2.381*
Works for Pte Co.	0.344	0.243	2.337	0.508*	0.153	2.458
Divorced/widowed women	0.398	0.221	2.111	0.505	0.275	2.038
Divorced/widowed men	0.634	0.098	2.000	0.531	0.219	2.103
States						
Aljazeera	0.356	0.227	2.431	0.552*	0.160	2.407*
Khartoum	0.300	0.354	2.244	0.333	0.217*	2.699*
Algadareaf	0.203	0.220	1.938	0.446*	0.240	2.338
North State	0.689	0.109	1.993	0.902*	0.000*	1.780
Red Sea	0.481	0.083	2.078	0.538	0.197	2.169
Blue Nile	0.554	0.231	1.993	0.731*	0.067*	2.258
Kassala	0.500	0.146	2.336	0.412	0.137	2.752*
River Nile	0.385	0.248	2.327	0.418	0.114	2.405
North Darfur	0.337	0.304	2.587	0.458	0.217	2.581
North Kordofan	0.496	0.298	1.643	0.601	0.291	1.778
Sennar	0.388	0.216	2.392	0.839*	0.021	1.885*
South Darfur	0.550	0.159	2.264	0.417	0.161	2.367
South Kordofan	0.341	0.159	1.902	0.483	0.217	1.875
West Darfur	0.392	0.192	2.436	0.442	0.225	2.437
White Nile	0.424	0.187	2.333	0.602*	0.080	1.846*

Notes: The data represents the average percentage who felt decisions to be fair (in contrast to the regressions where the variable is coded 1 if they are unfair), and that there was a bias from men towards women. The trust variable is the average response from the values indicated in Table 1. A value of 2.24 lies between some trust (coded 2) and little trust (coded 3). An * denotes that the 2014 estimate is significantly different to the 2013 estimate at the 1% significance level.

Table 3: Regression Results

	Fair	Fair	Fairer to men	Fairer to men	Trust	Trust	Trust	Trust
	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
Married	-0.1113*		-0.0262		-0.064			
	(1.91)		(0.39)		(1.33)			
Age	0.0205*	0.0141	0.003		0.0191**	0.01	0.0173*	
	(1.92)	(1.42)	(0.25)		(1.98)	(1.25)	(1.88)	
Age^2 (x100)	-0.024*	-0.0210*	-0.00045		-0.0023**	-0.0016	-0.0023**	
	(1.93)	(1.78)	(0.33)		(2.02)	(1.58)	(2.09)	
Gender	-0.0121		-0.2367*	-0.1549***	-0.1028			
	(0.10)		(1.65)	(3.07)	(0.97)			
Education	0.0575***	0.0255*	0.0247		0.0665***	0.035***	0.0491***	0.0293***
	(3.32)	(1.74)	(1.24)		(4.59)	(3.16)	(4.02)	(2.71)
Absolute income	-0.0041	-0.0586*	0.0392		-0.0085			
	(0.16)	(1.93)	(1.30)		(0.40)			
Urban	-0.0217		0.0032		-0.048			
	(0.46)		(0.06)		(1.27)			
Relative (to needs) income	-0.0573***	-0.0456***	-0.0285		-0.0268*	-0.0402***	-0.033**	
	(3.45)	(2.69)	(1.49)		(1.94)	(2.77)	(2.05)	
Divorced/widowed and a woman	0.0572	0.1725*	0.122	0.1827*	-0.1649*			
	(0.49)	(1.69)	(0.96)	(1.73)	(1.73)			
Divorced/widowed and a man	-0.4933***		-0.1002		-0.2938*			
	(2.89)		(0.48)		(1.95)			
Divorced/widowed								-0.200***
								(2.69)
Log of family size	0.0947**	0.1446***	0.0826*	0.1032**	-0.0202			-0.0672*
	(2.38)	(3.56)	(1.78)	(2.24)	(0.60)			(1.93)
Works	0.0901	0.0928*	0.0713		-0.0511		-0.0938**	-0.0685*
	(1.39)	(1.74)	(0.97)		(0.93)		(2.17)	(1.77)
Works for government	-0.1056	-0.1237*	-0.0223		0.0059			
	(1.51)	(1.92)	(0.28)		(0.10)			
Works for private firm	0.0184		-0.0089		0.1214*	0.1091*	0.1695**	0.112*
	(0.20)		(0.09)		(1.64)	(1.72)	(2.31)	(1.67)
Women's education	0.002		-0.0055		-0.0224			
	(0.09)		(0.22)		(1.21)			
2013 Dummy variable	0.2913***	0.2316***	0.2242***	0.2018***	-0.0797**	-0.0512	-0.0716*	-0.2226***
	(6.02)	(4.70)	(4.16)	(3.76)	(2.03)	(1.31)	(1.71)	(5.04)
Village Based Variables								
Bribe		-0.3823***		-0.3445***		-0.0966*		
		(5.18)		(4.72)		(1.72)		
Education		0.1182***		0.090***		0.0877***	0.0462**	
		(4.12)		(3.47)		(3.90)	(1.99)	
Absolute income		0.1076*		0.152**		-0.0991***	-0.113**	
		(1.69)		(2.39)		(2.19)	(2.22)	
Relative (to needs) income						0.0876**	0.1251***	0.1196***
						(2.39)	(3.12)	(3.32)
Electricity		0.1679***				0.1002**		
		(3.38)				(2.26)		
Sanitation		-0.1173**		-0.1046**		-0.1498***		-0.1214***
		(2.36)		(2.19)		(3.35)		(2.74)
Courts		-0.338***				-0.2225***		
		(5.87)				(4.92)		
Hospital		0.0013		-0.1619**		0.1026**	0.1412***	
		(0.03)		(2.04)		(2.44)	(3.59)	
School				0.2344***				
				(3.23)				
Water						0.1204**		0.1584***
						(2.29)		(3.38)

Police							-0.100***	
							(2.61)	
Decisions fair							0.5187***	
							(12.83)	
Predicted decision fair								2.823***
								(4.26)
Predicted decision Fair^2								-1.397**
								(2.34)
Constant	-0.8411***	0.7677*	-1.446***	-0.7898*				
	(3.46)	(1.75)	(5.30)	(1.86)				
Observations	3594	3529	3594	3742	3742	3932	3344	3677
Log Likelihood	-2315	-2216	-1648	-1689	-4888	-5107	-4238	-4772
X^2	324.5	392.3	158.3	220.6	274.2	348	456.9	321.4

Notes: 3.1-3.4 are estimated by binomial probit and 3.5-3.8 by ordered probit; t statistics in parentheses. ***/**/* denotes significance at the 1%/5%/10% levels of significance. Standard errors have been corrected for heteroscedasticty. Variables defined in Table 1, X^2 represents the likelihood ratio test statistic. Regional variables included in all regressions and shown in Figure 1.